

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
3 June 2004 (03.06.2004)

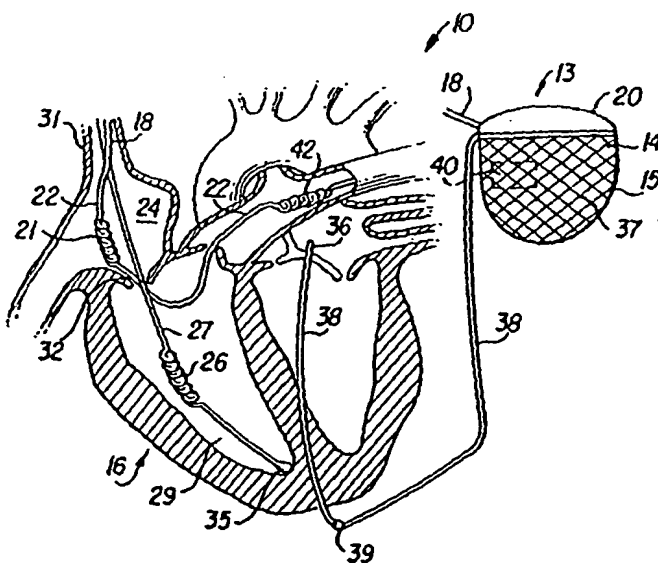
PCT

(10) International Publication Number  
**WO 2004/045385 A3**

- (51) International Patent Classification<sup>7</sup>: A61N 1/368
- (21) International Application Number: PCT/US2003/037099
- (22) International Filing Date: 20 November 2003 (20.11.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/427,712 20 November 2002 (20.11.2002) US  
Not furnished 19 November 2003 (19.11.2003) US
- (71) Applicant: UNIVERSITY OF PITTSBURGH - OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION [US/US]; 200 Gardner Steel Conference Center, Thackeray and O'Hara Streets, Pittsburgh, PA 15260 (US).
- (72) Inventor; and  
(75) Inventor/Applicant (for US only): SABA, Fawzi, Samir [CA/US]; 230 North Craig Street, Apt. 701, Pittsburgh, PA 15213 (US).
- (74) Agents: CARROLL, Peter, G. et al.; Medlen & Carroll, LLP, Suite 350, 101 Howard Street, San Francisco, CA 94105 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— with international search report
- (88) Date of publication of the international search report: 13 January 2005

[Continued on next page]

(54) Title: A DEVICE AND METHOD TO DISCRIMINATE BETWEEN SUPRA VENTRICULAR TACHYCARDIAS AND VENTRICULAR ARRHYTHMIAS



(57) Abstract: This invention provides a method to discriminate between ventricular arrhythmia and supraventricular tachycardia by detecting an earliest arriving electrical signal following antitachycardia pacing. Also disclosed is an implantable cardiac defibrillator (13) that is capable of simultaneous atrioventricular anti-tachycardia pacing bursts produced from a signal generator (14) and detecting an earliest arriving electrical signal. This discrimination capability reduces the incidence of inappropriate shocks from dual-chamber implantable cardiac defibrillators to near zero and provides a method to differentially diagnose supraventricular tachycardia from ventricular tachycardia.



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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/37099

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61N 1/368

US CL : 607/004

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 607/004, 005, 009, 014, 015; 600/515, 518

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,562,708 A (COMBS et al.) 08 October 1996 (08.10.1996), see entire document.	1-5
X	US 5,383,910 A (den DULK) 24 January 1995 (24.01.1995), see entire document.	6-10 and 19-26
X	US 5,476,482 A (LU) 19 December 1995 (19.12.1995), see entire document.	11-18

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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Date of the actual completion of the international search

25 October 2004 (25.10.2004)

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Date of mailing of the international search report

Authorized officer

Kennedy Schaetzle

Telephone No. 703 308-0858

# INTERNATIONAL SEARCH REPORT

PCT/US03/37099

## Continuation of B. FIELDS SEARCHED Item 3:

EAST

search terms: atria, ventricle, simultaneous, pacing, defibrillating, AV, tachycardia, ECG